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PUBLIC SERVICE COMMISSION

December 10, 2014

VIA HAND DELIVERY

Mr. Jeff Derouen **Executive Director** Kentucky Public Service Commission P.O. Box 615 211 Sower Boulevard Frankfort, KY 40602

PSC Case No. 2014-00359 Re:

Dear Mr. Derouen:

Please find enclosed for filing with the Commission in the above-referenced case an original and ten copies of the responses of East Kentucky Power Cooperative, Inc. ("EKPC"), to the Staff's Second Request for Information to an Order dated November 20, 2014.

Very truly yours,

David S. Samford

Enclosures

Cc: Parties of Record

COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

DEC 10 2014

PUBLIC SERVICE
COMMISSION

In the Matter of:

TARIFF FILING OF EAST KENTUCKY POWER)	
COOPERATIVE, INC. FOR APPROVAL OF A)	CASE NO.
NEW DEMAND-SIDE MANAGEMENT PROGRAM)	2014-00359
ENERGY STAR MANUFACTURED HOME)	
PROGRAM		

RESPONSES TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION
TO EAST KENTUCKY POWER COOPERATIVE, INC.,
DATED NOVEBER 20, 2014

COMMONWEALTH OF KENTUCKY

RECEIVED

BEFORE THE PUBLIC SERVICE COMMISSION

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PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

TARIFF FILING OF EAST KENTUCKY POWER)	
COOPERATIVE, INC. FOR APPROVAL OF A)	CASE NO.
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ENERGY STAR MANUFACTURED HOME)	
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CERTIFICATE

COUNTY OF CLARK)
COUNTY OF CLARK)

Scott Drake, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff's Second Request for Information in the above-referenced case dated November 20, 2014, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Notary Public
State at Large
Kentucky
My Commission Expires Nov 30, 2017

Scott Draly

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED 11/20/14 REQUEST 1

RESPONSIBLE PARTY: Scott Drake

Refer to the cover letter ("Cover Letter") filed September 11, 2014. In the Cover Letter, EKPC states, "Upon Commission approval of this tariff, EKPC will execute an agreement with SBRA to administer the ENERGY STAR® manufactured home program for EKPC and its participating owner-members." Refer also to EKPC's response to the Commission Staff's Initial Request for Information ("Staff's Initial Request"), Item 2, which states, "The numbers EKPC used on its cost-effectiveness analysis were based on the parameters in EKPC's contract with Systems Building Research Alliance ("SBRA")."

Request 1a. Explain whether EKPC has signed an agreement with SBRA, and if so, provide the agreement.

Response 1a. EKPC and SBRA have come to terms on the agreement. However, EKPC informed SBRA that EKPC will not sign the agreement until EKPC receives the approved program tariff from the Commission.

Request 1b. If EKPC has a draft of the agreement that has yet to be executed, provide the draft agreement.

Response 1b. Please see pages 3 through 7 of this response for a copy of the draft agreement.

Request 1c. If neither an executed agreement nor a draft agreement exists, describe the proposed contract provisions and the proposed performance of each party.

Response 1c. Not applicable.



1776 Broadway, Suite 2205 New York, NY 10019 212 496 0900 Tel 212 496 5389 Fax www.research-alliance.org

ENERGY STAR Manufactured Housing Program East Kentucky Power Cooperative, Inc.

Background

The Systems Building Research Alliance (SBRA) is a national non-profit organization founded in 1995. SBRA was established by a consortium of electric utilities in the Southeast and the major companies of the factory building industry with the express goal of developing and implementing solutions for improving energy performance of new and existing factory built homes. Among SBRA's current responsibilities are providing national oversight for the ENERGY STAR factory built homes program in support of the U.S. Environmental Protection Agency (EPA). To foster innovative thinking and advances in building practice, SBRA is the nexus for bringing together representatives of the factory building industry with public agencies, non-profits and other organizations.

SBRA is uniquely positioned to provide professional services related to operation of the ENERGY STAR Manufactured Housing Program by integrating existing ENERGY STAR-related assets for the benefit of the project. These include the following:

- SBRA is responsible to U.S. EPA for quality control oversight of ENERGY STAR factory built homes. SBRA authored the ENERGY STAR compliance protocol for factory built homes and oversees a network of third-party quality inspectors known as ENERGY STAR Certifiers that work with the plants.
- SBRA has long-standing established relationships with the factory building stakeholders in EKPC's service territory.
- SBRA tracks every ENERGY STAR manufactured home produced in the U.S. through a proprietary web-based database known as the ENERGY STAR *Information Manager*.
- For the past seven years, SBRA has been responsible for facilitating, overseeing and
 implementing programs that promote—generally with the aid of financial incentives—the
 construction and sale of ENERGY STAR factory built homes. SBRA has administered ENERGY
 STAR housing rebate programs in cooperation with utilities and state agencies in several areas
 across the nation, including California, Nevada, North Carolina and in the Tennessee Valley
 Authority's seven-state service area in the Southeast.

With this varied experience, SBRA has honed the approach to creating an environment conducive to changing building practices, specifically moving the industry toward making ENERGY STAR an integral part of new construction practice.

Objective

The ENERGY STAR Manufactured Housing Program is intended to grow the market for ENERGY STAR homes in East Kentucky Power Cooperative's (EKPC) service area by providing manufactured home producers with an incentive to promote and facilitate the completion of new ENERGY STAR certified manufactured homes.

Measure Description

The Program will pay incentives in the form of rebates for electrically heated manufactured homes that qualify for the ENERGY STAR label as defined by the U.S. EPA. ENERGY STAR compliance requires the use

of a combination of envelope and equipment measures that in combination result in performance that is significantly more energy efficient than comparable homes built to the federal HUD code¹.

An ENERGY STAR certified manufactured home is equipped with the following features:

- Thermal envelope improvements
 - increased envelope insulation
 - improved duct insulation
 - tight ducts construction
 - high efficiency windows (requirements for U-value, area and solar heat gain coefficient)
 - tight envelope construction
- High efficiency equipment/control strategies
 - high efficiency heat pumps in place of typically installed electric resistance furnaces and air conditioning equipment
 - high efficiency domestic water heater
 - programmable thermostat

Quality Assurance

Under a policy effective November 1, 2005, the U.S. EPA made plant certification, third-party plant Certifier oversight and field performance verification for ENERGY STAR manufactured homes the responsibility of SBRA as the national Quality Assurance Provider (QAP). To assure quality at every step in the ENERGY STAR process, SBRA has established a process that both leverages the quality control measures already in place for manufactured homes (the plant DAPIA and IPIA process discussed below) and has created a separate network of third-party agents called ENERGY STAR Certifiers that function in a similar capacity as Home Energy Rating System (HERS) raters and providers. This four-tiered quality control system—DAPIAs, IPIAs, Certifiers and SBRA—taken together assure that ENERGY STAR manufactured homes consistently perform to expectation and, if and when exceptions arise, they are addressed quickly and the method of their resolution is used to improve the overall QC process.

There are several overlapping and reinforcing procedures identified below that assure that the manufacturer that builds ENERGY STAR homes is meeting or exceeding the requirements of the program.

- DAPIA approvals of the ENERGY STAR package: Under the HUD standards that regulate manufactured homes, every design must be approved by a third-party agent called the Design Approval Primary Inspection Agency (DAPIA). Manufacturers develop ENERGY STAR compliant packages that are incorporated into the DAPIA package and are thus covered under the umbrella of HUD enforcement. Therefore, failure to build the home as specified would be a regulatory breach. Conformance of the design to the ENERGY STAR requirements is verified by the ENERGY STAR Certifiers.
- IPIA approval during construction: The HUD standards also require an in-plant inspection of all
 homes by another third party called an IPIA (In-Plant Plan Inspection Agency). The IPIA is
 responsible for verifying that the manufacturer is building the home in accordance with the
 DAPIA-approved plans. For ENERGY STAR homes, the IPIA checks during the production process
 that the home is built with the required insulation, equipment, windows, controls and other
 features found on the approved plans.
- ENERGY STAR Certifiers: Separate and apart from the above process that leverages the existing
 inspection agencies, every manufacturer must have a third-party ENERGY STAR Certifier. The

¹ 24 CFR Part 3280, *Manufactured Home Construction and Safety Standards*, U.S. Department of Housing and Urban Development.

Certifiers are responsible to SBRA as the ENERGY STAR QAP. SBRA requires that these agents have skills equivalent to HERS raters and must be familiar with factory building practices. The actions of the manufactured home Plant Certifiers are governed by procedures stipulated by SBRA. The Certifiers provide a unique function and are on the front lines of assuring conformance to ENERGY STAR requirements. The role of the Certifier includes the following:

- Oversee the plant ENERGY STAR qualification process.
- Train plant production staff in ENERGY STAR techniques.
- Review and if acceptable, approve plant processes and the plant's ENERGY STAR-related documentation, including ENERGY STAR qualified home designs, ENERGY STAR Site Installation Checklist, Quality Control Manual and the Manufacturer's Site Installation Manual.
- After initial plant certification, conduct ongoing quality control inspection and testing of a representative sample of completed homes.
- Participate in and contribute to periodic meetings of Certifiers conducted by SBRA regarding program quality control and oversight.
- SBRA Oversight: As the national QAP, SBRA oversees the work of the Certifiers and routinely reviews quality control methods and approaches with the Certifiers.

Market Characteristics at a Glance

	Total new manufactured home shipments for Kentucky ²	,214
•	Estimated number of homes placed in EKPC's service area	,000
	Estimated percent of homes in Kentucky with electric resistance heat	.80%
•	Total potential market (number of new homes annually)	. 800
	Target number of program rebate homes (annually)	. 400

Rebate Amount

An incentive of \$1,750 would be paid to the home manufacturer for each new ENERGY STAR certified home that is retail sold to a customer of EKPC and equipped with a heat pump. Providing the incentive directly to the manufacturer (as opposed to the customer or retailer) is, in effect, a wholesale purchase since it covers the factory-installed measure costs before markups. This leverages the program investment and, compared with a customer incentive, nearly doubles the energy savings per rebate

dollar. Payment of the incentive to the home manufacturer would be subject to demonstrated completion of the following items:

- Construction in the plant of the home with features that meet or exceed the provisions of the ENERGY STAR New Homes program for manufactured homes along with all required documentation.
- Affixing the U.S. EPA ENERGY STAR (blue) and SBRA Quality Assurance (gray) labels to the home (see Figure 1), signifying that the home is built in accordance with the program quality control procedures.



Figure 1. Labels for ENERGY STAR Manufactured Homes

² Based on 2013 market data.

- Recording information about the home in the ENERGY STAR Information Manager, SBRA's proprietary web-based compliance tracking software.
- Installation of the home at the building site and completion of the ENERGY STAR
 Site Installation Checklist. As part of this process, verifying the installation of the heat pump as required under the program.
- Signing the Site Installation Checklist and the Quality Assurance label by an authorized agent of the manufacturer.
- Archiving documentation detailing the items above for inspection by SBRA and the plant's ENERGY STAR Certifier. (The Certifier will further verify compliance with these requirements by testing in the field a representative sample of homes built by the manufacturer.)

Scope of Work

Implementation of the ENERGY STAR Manufactured Housing Program would consist of two main efforts: initial development, coordination and outreach activities to launch the program in EKPC's service area, and ongoing facilitation activities required to review and approve homes for the rebate.

Task 1. Program Start-Up

This task includes the following start-up activities needed to launch the program:

- Develop a Zip Code Look Up Tool to be used by plants and SBRA to verify that a home is located in EKPC's service area;
- Modify SBRA's databases for compliance tracking and monthly reporting to EKPC;
- Coordinate with EKPC to establish a process for verifying homes that are located on the border or "cusp" of EKPC's service area;
- Conduct outreach to plants and educate key plant personnel on EKPC program procedures and requirements; and,
- Execute a Memorandum of Understanding (MOU) with each plant stipulating the terms and conditions of participating in the Program.

Task 2. Program Facilitation, Rebate Management and Ongoing Support

Program facilitation activities include the following:

- General program administration, management and oversight: Create management systems, day-to-day program administration, contract administration, overall coordination and general liaison with EKPC Program Manager to review program status and resolve issues.
- Verify home eligibility: Identify potential program homes in the "pipeline" and follow-up with
 plants to encourage submission of rebate documentation; coordinate with EKPC to verify
 customer account or home address for "cusp" homes.
- Compliance tracking and verification: Review data provided by the home manufacturer via
 Information Manager and review the completed *Site Installation Checklist* to track and verify
 compliance of submitted homes and heating/cooling equipment with program requirements;
 follow up with manufacturer on any missing information or documentation.
- Monthly invoicing and reporting: Compile data and provide monthly report to EKPC on ENERGY STAR home production and completions, and progress toward meeting program goals. The data listed below will be provided in MS Excel format along with the invoice each month. The completed Site Installation Checklist for each home also will be uploaded in EKPC's Energy Efficiency Collaborative Platform (EECP), EKPC's DSM program tracking system.

HOME	HOME MANUFACTURER	PROGRAM TRACKING
Home Serial No.	Corporate Parent Company	SBRA Invoice No.
Manufacture Date	Plant Company Name	Date Received
Installation Checklist Date	Plant City	Date Approved
Home Sq Ft	Plant State	Notes
HOMEOWNER	HOME RETAILER	EQUIPMENT
Homeowner Name	Retailer Company Name	Furnace kW
Home Street Address	Retailer Street Address	A-coil Manufacturer/Brand
Home City	Retailer City	A-coil Model Mo.
Home State	Retailer State	Condenser Manufacturer
Home ZIP	Retailer ZIP	Condenser Model Mo.
Home Phone (if provided)	Retailer Contact Person	Size (cooling tons)
Utility ID (provided by EKPC)	Retailer Phone (if provided)	Ratings: HSPF, SEER, EER

- Process incentive disbursements: SBRA will work with EKPC to provide information required for
 each home in the EECP system. Information may be provided monthly for automated uploads in
 the EECP system or may be entered by SBRA. The EECP will generate monthly payments to SBRA
 based on the number of ESMHs completed on the EKPC system. Rebates will be paid by SBRA to
 the manufactured home plants.
- Quality control: SBRA will provide independent review, quality control and technical support to manufactured housing plants. Through existing protocols, SBRA's network of ENERGY STAR Certifiers will inspect in the field a sample of homes for compliance with the ENERGY STAR provisions.

Cost Proposal

The program cost estimate is based on **400 homes** qualifying for the rebate. The total cost of the program for the first 18 months would be **\$765,800** and is divided in two parts as follows:

- Rebates: A \$1750 rebate shall be provided to manufactured home producers for each
 electrically heated ENERGY STAR home sold to an EKPC customer and equipped with a heat
 pump. The projected number of homes to be covered under the program is 400, for a total
 rebate budget of \$700,000.
- Service Fee: For services to conduct Task 1 Program Start-up activities and Task 2 Program
 Facilitation, Rebate Management and Ongoing Support as described above. Total payments for
 these tasks shall not exceed \$65,800 and is divided in two parts as follows:

TASK	PAYMENT STRUCTURE	COST	
1. Program Start-Up	Time & Materials, Not-to-Exceed	\$5,800	
Program Facilitation, Rebate Management and Ongoing Support	Fixed-Unit-Price, Performance-based	\$150 per home, \$60,000 total	

Key Contacts

Systems Building Research Alliance Emanuel Levy Gwynne Koch
1776 Broadway, Suite 2205 Executive Director Contracts & Accounting
New York, NY 10019 elevy@research-alliance.org gkoch@research-alliance.org
www.research-alliance.org 212-496-0900 ext. 140 212-496-0900 ext. 120

Authorized By

Name: Emanuel Levy Executive Director July 1, 2014

Title Date

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED 11/20/14 REQUEST 2

RESPONSIBLE PARTY:

Scott Drake

Refer to EKPC's response to Staff's Initial Request, Item 2. The response provided the projected Energy Star Manufactured Home Program ("ESMHP") participation by year from 2015 to 2018, and also stated, "The projected number of homes in that contract is 400 over an 18-month period. EKPC used that figure so that the participation, savings, and costs would all match."

Request 2a. If there is an agreement with SBRA, explain whether the contract time period is only for 18 months, and if so, explain why it is for 18 months.

Response 2a. Yes, there is a draft agreement with SBRA and the contract period was for 18 months. Please see the response to Request 1b. The Cost Proposal section on the last page of the agreement notes an estimated 400 homes over the first 18 months. Please note the agreement was signed by SBRA on July 1, 2014. The original 18 month agreement timeframe was initially chosen to allow for annual calendar renewals beyond the first 18 month period. As noted in the agreement, SBRA is paid per ENERGY STAR® qualifying unit. SBRA estimates 400 units per year when the program matures.

Request 2b. Explain the statement, "EKPC used that figure so that the participation, savings, and costs would all match."

Request 2b. The statement, "EKPC used that figure so that the participation, savings, and costs would all match" referred to the assumptions used in the cost-effectiveness analysis filed with this tariff. EKPC used the costs in the SBRA agreement in this analysis, and also used the participation rate from the SBRA agreement in the analysis. In that way, both the costs and the benefits would be for the same contract period.

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED 11/20/14 REQUEST 3

RESPONSIBLE PARTY: Scott Drake

Refer to EKPC's response to Staff's Initial Request, Item 2. The response noted that manufactured homes ready to purchase on the lot are typically not upgraded to ENERGY STAR® standards, but that custom-ordered manufactured homes typically are upgraded to ENERGY STAR® standards. The response further stated that EKPC could expect that "50% of the eligible market" of 800 new homes per year would participate in the proposed demand-side management program. Explain whether the 800 new homes refers to all the manufactured homes or just to the custom-ordered manufactured homes sold in EKPC's market.

Retailers typically carry stock or display homes that are used to help customers decide on the floor plan and features for their homes. Generally, the display homes are not built as ENERGY STAR® compliant homes. However, approximately 60% of actual sales are homes purchased to order, based on the stock model designs, but able to be upgraded to ENERGY STAR®. EKPC expects that most of the program homes will be in the latter category: custom built homes that qualify for ENERGY STAR®.

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED 11/20/14 REQUEST 4

RESPONSIBLE PARTY: Scott Drake

Request 4. Refer to EKPC's response to Staff's Initial Request, Item 4.

Request 4a. Explain whether there is a Production Inspection Primary Inspection Agency or Design Approval Primary Inspection Agency ("DAPIA") in Kentucky, and if so, identify the Kentucky agency contact.

Response 4a. DAPIAs and IPIAs are third-party inspectors licensed by the US Department of Housing and Urban Development. Five (5) companies are approved to act as DAPIAs and IPIAs in Kentucky: HWC & Associates, NTA, PFS Corporation, RADCO and T. R. Arnold & Associates. Contact information for these companies may be found here:

http://www.research-alliance.org/pages/es_cert_side.htm

Request 4b. Describe the DAPIA package.

Response 4b. The DAPIA package is a set of home design, factory construction, and site installation specifications and/or drawings that describes how the home is to be built to conform to the HUD standards and, as required, the ENERGY STAR® program. The DAPIA package is reviewed and stamped by a registered engineer and approved by the plant DAPIA.

Request 4c. Explain who has oversight of the United States Housing and Urban Development-authorized agent inspectors.

Response 4c. The United States Department of Housing and Urban Development, Office of Manufactured Housing Programs; please see

(http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/rmra/mhs/mhshome

Request 4d. Identify the third-party independent inspection agency and describe the inspections and tests that are performed by the third-party independent inspection agency.

Request 4d. For inspections of ENERGY STAR® homes, the third parties are agents approved by the SBRA and are identified in Response 4a. A complete list can be found here:

http://www.research-alliance.org/pages/es_cert_side.htm

Third-party inspectors inspect and confirm the homes are built to the standards in the DAPIA package. On-site inspections after installation include the inspection of certain energy efficiency

measures; a blower-door test to confirm that the structure is air-tight, and an inspection to confirm that the attic insulation still conforms to DAPIA requirements after transportation, etc.

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED 11/20/14 REQUEST 5

RESPONSIBLE PARTY: Scott Drake

Refer to EKPC's response to Staff's Initial Request, Item 6. Explain whether and how this program will eliminate free-riders.

Response 5. EKPC expects the incidence of free-ridership to be very low in this program. To this point, very few manufactured homes for sale in Kentucky have been ENERGY STAR® certified manufactured homes. Less than 1% of the new manufactured homes in Kentucky are certified as ENERGY STAR according to *Next Step*, a Kentucky-based non-profit organization promoting ENERGY STAR® manufactured homes. Very few consumers are purchasing ENERGY STAR® manufactured homes in the absence of this program. In fact, this program is designed to transform the market for ENERGY STAR® homes by providing upstream incentives to the manufactured home producers to complete new ENERGY STAR® certified manufactured homes. This program encourages the market for ENERGY STAR® certified manufactured homes to develop.

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED 11/20/14 REQUEST 6

RESPONSIBLE PARTY: Scott Drake

Request 6. Provide the projected average annual kWh savings EKPC expects to achieve from the ESMHP per member participant.

Response 6. EKPC is projecting that the annual savings per participant will be 11,947 kWh per home.

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED 11/20/14 REQUEST 7

RESPONSIBLE PARTY:

Scott Drake

Request 7. Explain how the ESMHP is to be promoted.

Response 7. The ESMHP is an upstream DSM program that relies upon having SBRA promote the program directly to the manufacturers who sign a Memorandum of Understanding stipulating their commitment to follow the program rules. Those manufacturers then have an incentive to actively promote the program to their retailers and customers without additional costs to EKPC. In other markets, this has been an effective means of communication and promotion.